

**Compte-rendu de TP1**

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Cursus : Master 1 LBD

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Exercice1 :

/\* Infinite loop \*/

  /\* USER CODE BEGIN WHILE \*/

  while (1)

  {

    /\* USER CODE END WHILE \*/

    /\* USER CODE BEGIN 3 \*/

    //HAL\_GPIO\_TogglePin(LD2\_GPIO\_Port, LD2\_Pin);

        //HAL\_Delay(500);

        if(ledOn){

          HAL\_GPIO\_WritePin(LD2\_GPIO\_Port, LD2\_Pin, GPIO\_PIN\_SET);

        }else{

          HAL\_GPIO\_WritePin(LD2\_GPIO\_Port, LD2\_Pin, GPIO\_PIN\_RESET);

        }

  }

  /\* USER CODE END 3 \*/

}

/\* USER CODE BEGIN 4 \*/

void HAL\_GPIO\_EXTI\_Callback(uint16\_t GPIO\_Pin){

  if(GPIO\_Pin == USER\_PB\_Pin){

    ledOn = !ledOn;

  }

}

/\* USER CODE END 4 \*/

Exercice2 :

/\* Private typedef -----------------------------------------------------------\*/

/\* USER CODE BEGIN PTD \*/

**int** np\_press=0;

/\* USER CODE END 2 \*/

/\* Infinite loop \*/

/\* USER CODE BEGIN WHILE \*/

**while** (1)

{

/\* USER CODE END WHILE \*/

/\* USER CODE BEGIN 3 \*/

**if** (np\_press==1){

**printf**("button pressed\r;\n");

**if**(ledOn){

HAL\_GPIO\_WritePin(LD2\_GPIO\_Port, LD2\_Pin, *GPIO\_PIN\_SET*);

**printf**("LED is ON\r\n");

}**else**{

HAL\_GPIO\_WritePin(LD2\_GPIO\_Port, LD2\_Pin, *GPIO\_PIN\_RESET*);

**printf**("LED is OFF\r\n");

}

np\_press=0;

}

}

/\* USER CODE END 3 \*/

/\* USER CODE BEGIN 4 \*/

**void** **HAL\_GPIO\_EXTI\_Callback**(uint16\_t GPIO\_Pin){

**if**(GPIO\_Pin == USER\_PB\_Pin){

ledOn = !ledOn;

np\_press = 1;

}

}

Exercice3 :

/\*-[ I2C Bus Scanning ]-\*/

**printf**("Début du programme\r\n");

**for**(uint16\_t i = 1; i < 128; i++) {

HAL\_StatusTypeDef ret = HAL\_I2C\_IsDeviceReady(&hi2c1, i << 1, 1, 10);

**if**(ret == *HAL\_OK*) {

**printf**("Device found at address: 0x%X\r\n", i);

HAL\_Delay(100); // Attente pour éviter de saturer le bus I2C

}

}

**printf**("Fin du programme\r\n");

/\*--[ Scanning Done ]--\*/